IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed, the method comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots,

determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

reducing, ~~by means of~~ using the first determined weighting coefficient, in soft bit decision-making the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision, and

reducing, ~~by means of~~ using the second determined weighting coefficient, in soft bit decision-making the significance of at least one symbol at the end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

2. (Currently Amended) A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed, the method comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots,

determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot, and

reducing, ~~by means of~~ using the first determined weighting coefficient, in soft bit decision-making the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

3. (Currently Amended) A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed, the method comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots,

determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot, and

reducing, ~~by means of~~ using the second determined weighting coefficient, in soft bit decision-making the significance of at least one symbol at the end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

4. (Currently Amended) A method as claimed in claim 1, 2 or 3, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if ~~it~~ the difference exceeds a determined threshold value.

5. (Previously Presented) A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients are higher than 0 but lower than 1.

6. (Previously Presented) A method as claimed in claim 1, 2 or 3, wherein the strength of the signal received at the base station is determined using RSSI (Received Signal Strength Indicator) measurement.

7. (Previously Presented) A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients have the same values for all symbols to be weighted in each time slot.

8. (Previously Presented) A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients have different values for different symbols to be weighted in each time slot.

9. (Currently Amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a received signal and employs a decoder for soft decision-making; the base station receiver comprising ~~comprises~~:

means for measuring the strength of the signal the base station receives in at least two consecutive time slots,

means for determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

means for determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

means for reducing, using ~~by means of~~ the first determined weighting coefficient, in soft bit decision-making the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision, and

means for reducing, using ~~by means of~~ the second determined weighting coefficient, in soft bit decision-making the significance of at least one symbol at the end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

10. (Currently Amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a received signal and employs a decoder for soft decision-making; the base station receiver comprising ~~comprises~~:

means for measuring the strength of the signal the base station receives in at least two consecutive time slots,

means for determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station

receives in a previous time slot, and

means for reducing , using ~~by means of~~ the first determined weighting coefficient, in soft bit decision-making the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

11. (Currently Amended) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a signal received at a base station and employs a decoder for soft decision-making; the base station receiver comprising ~~comprises~~:

means for measuring the strength of the signal the base station receives in at least two consecutive time slots,

means for determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot, and

means for reducing , using ~~by means of~~ the second determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the end of a burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

12. (Currently Amended) A ~~system~~ base station receiver as claimed in claim 9, 10 or 11, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if ~~it~~ the difference exceeds a determined threshold value.

13. (Currently Amended) A ~~method~~ base station receiver as claimed in claim 9, 10 or 11, wherein the weighting coefficients are higher than 0 but lower than 1.

14. (Currently Amended) A ~~method~~ base station receiver as claimed in claim 9, 10 or 11, wherein the strength of the signal received at the base station is determined using RSSI (Received Signal Strength Indicator) measurement.

15. (Currently Amended) A ~~method~~base station receiver as claimed in claim 9, 10 or 11, wherein the weighting coefficients have the same values for all symbols to be weighted in

each time slot.

16. (Currently amended) A ~~method~~base station receiver as claimed in claim 9, 10 or 11, wherein the weighting coefficients have different values for different symbols to be weighted in each time slot.

17. (New) A base station receiver as claimed in claim 9, 10 or 11, wherein the base station receiver is implemented by a processor.

18. (New) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a received signal and employs a decoder for soft decision-making; wherein the base station receiver is configured to measure the strength of the signal the base station receives in at least two consecutive time slots, configured to determine a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot, configured to determine a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot, configured to reduce, using the first determined weighting coefficient, in soft bit decision-making, the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision, and configured to reduce, using the second determined weighting coefficient, in soft bit decision-making, the significance of at least one symbol at the end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

19. (New) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a received signal and employs a decoder for soft decision-making; wherein the base station receiver is configured to measure the strength of the signal the base station receives in at least two consecutive time slots, configured to determine a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with

the strength of the signal the base station receives in a previous time slot, and configured to reduce, using the first determined weighting coefficient, in soft bit decision-making, the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

20. (New) A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a signal received at a base station and employs a decoder for soft decision-making; the base station receiver being configured to measure the strength of the signal the base station receives in at least two consecutive time slots, configured to determine a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot, and configured to reduce, using the second determined weighting coefficient, in soft bit decision-making, the significance of at least one symbol at the end of a burst the base station receives in a time slot if the difference between the measured signal strengths is considerable enough to produce an erroneous bit decision.

21. (New) A base station receiver as claimed in claim 18, 19 or 20, wherein the difference in signal strengths is considerable enough to produce an erroneous bit decision if the difference exceeds a determined threshold value.

22. (New) A base station receiver as claimed in claim 18, 19 or 20, wherein the weighting coefficients are higher than 0 but lower than 1.

23. (New) A base station receiver as claimed in claim 18, 19 or 20, wherein the strength of the signal received at the base station is determined using RSSI (Received Signal Strength Indicator) measurement.

24. (New) A base station receiver as claimed in claim 18, 19 or 20, wherein the weighting coefficients have the same values for all symbols to be weighted in each time slot.

25. (New) A base station receiver as claimed in claim 18, 19 or 20, wherein the weighting coefficients have different values for different symbols to be weighted in each time slot.

26. (New) A base station receiver as claimed in claim 18, 19 or 20, wherein the base station receiver is implemented by a processor.